disposal for the work. It therefore appears to be more correct for clearing up the question to only partially ascertain the manufacturing costs, and, indeed, in such wise that one leaves open a portion x thereof, which is to be made up of all those items which possess the same value in all the processes taken for comparison, or can be brought to the same value. To this quantity x undoubtedly belong the entire costs of casting the finished steel, since it is absolutely indifferent for this operation by what method the metal has been won if it is supplied in like intervals of time and in equal quantities, and if it is cast into the same products.

One can further allocate the cost of deoxidation to the Item x since it is possible in all processes, to so conduct the process, that the object is attained with the same ferro-manganese.

Further, one can with some qualification also allocate to this item the costs of the weighing of all materials within the works, since with suitable disposition of, and the excellent mechanical plants which are nowadays nstalled in modern works, these costs take up in general no great amount; in. addition, the quantities of materials in the pneumatic and open-hearth processes to be compared, are not very different, as will.be made apparent later.

Finally, one can likewise take the general charges, inclusive of amortisation, as about equal, and to be reckoned with the foregoing.

In respect of workmen's wages, the pneumatic plants appear at first sight to be at an advantage, since one sees only very few people in their manufacturing departments, whilst in the open-hearth furnaces, quite a numerous personnel shows up. But the pneumatic refining plants possess a quite extensive apparatus, and the people who must serve this, work, so to say, behind the scenes. If one takes this into account, as indeed must be done, the difference appears no longer so great-0. Thiel has even claimed (" St. und E.," 1901, p. 1306) that the basic open-hearth furnace requires fewer people and, therefore, is able to cost less in wages than the Thomas-Gfilchrist process. Now the total wages per ton of steel amount to only about 3 Marks per ton, and therefore one will make no great error if one also includes wages under the item x for both processes.